







This project is funded by a Rapid Response National Science Foundation grant #2032790, #2032787, and #2032787.

2020 COVID-19 RAPID Response: *Pandemic Preparedness in Remote Rural Fishing Communities Facing Rapid, Massive, Seasonal In-Migration*

Surveying the Bristol Bay fishing industry (and adjacent) during Covid

- We designed the survey in June 2020 and conducted it online in July and August 2020
- We estimate that we received about 926 valid responses from real people who were eligible for the survey.
- We emailed participants Amazon Gift Cards based on their response to a lottery question. People could earn between $30 and $5 based on the coin toss and their response to the lottery question.

Surveying the Bristol Bay fishing industry (and adjacent) during Covid

What kind of information did we get?

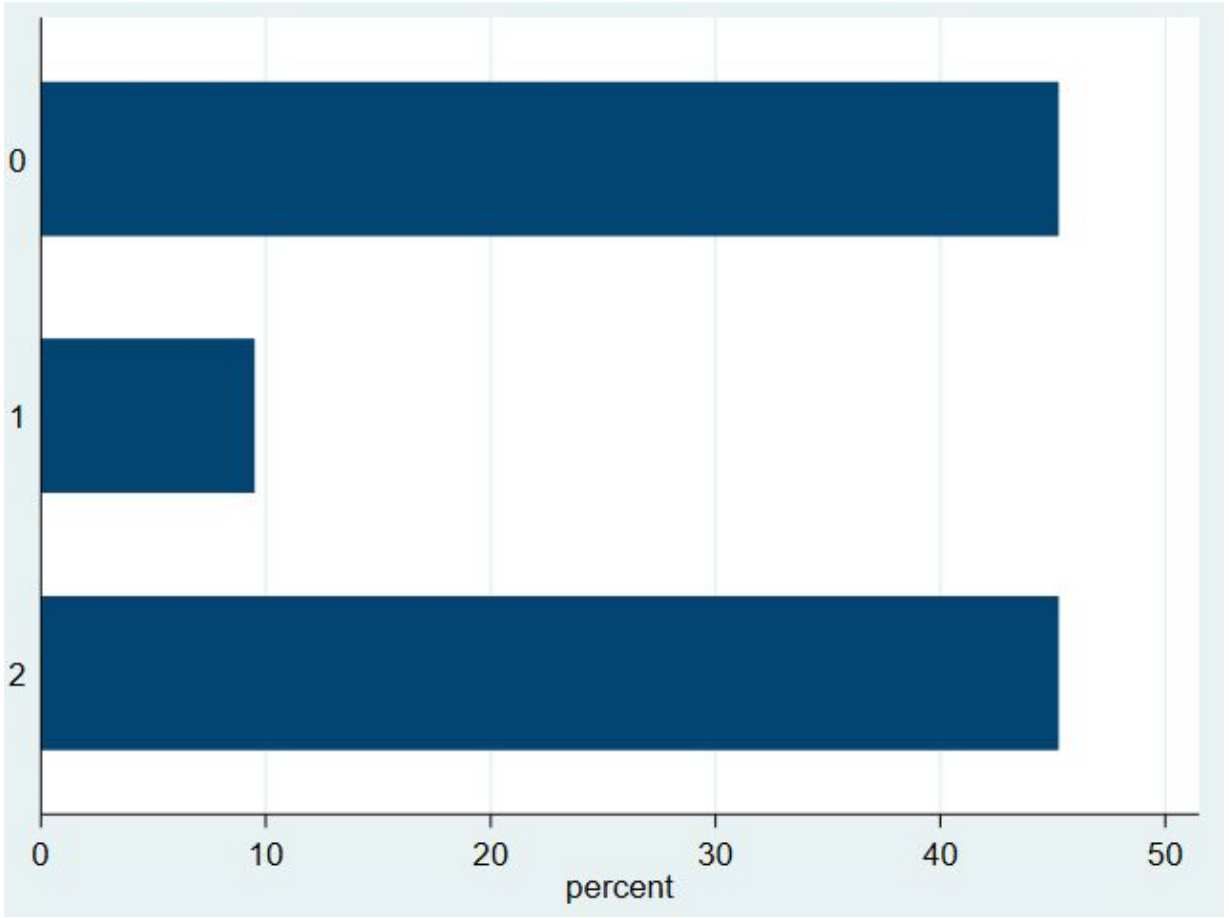
- Basic demographics
- Labor force information
- Health information
- COVID-19 related policy questions
- Risk perceptions and preferences

Where are respondents from?

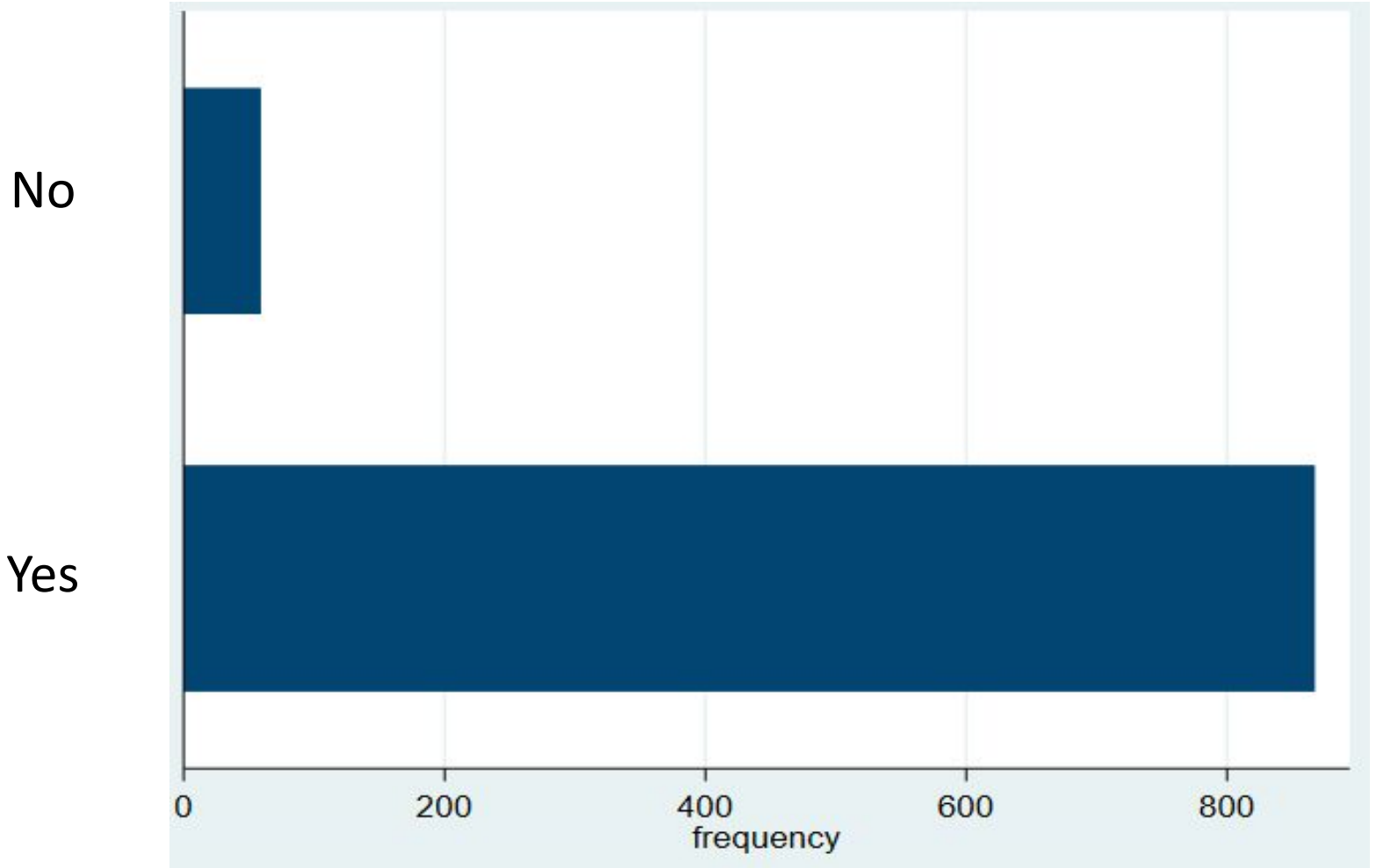
Bristol Bay region

Other part of Alaska

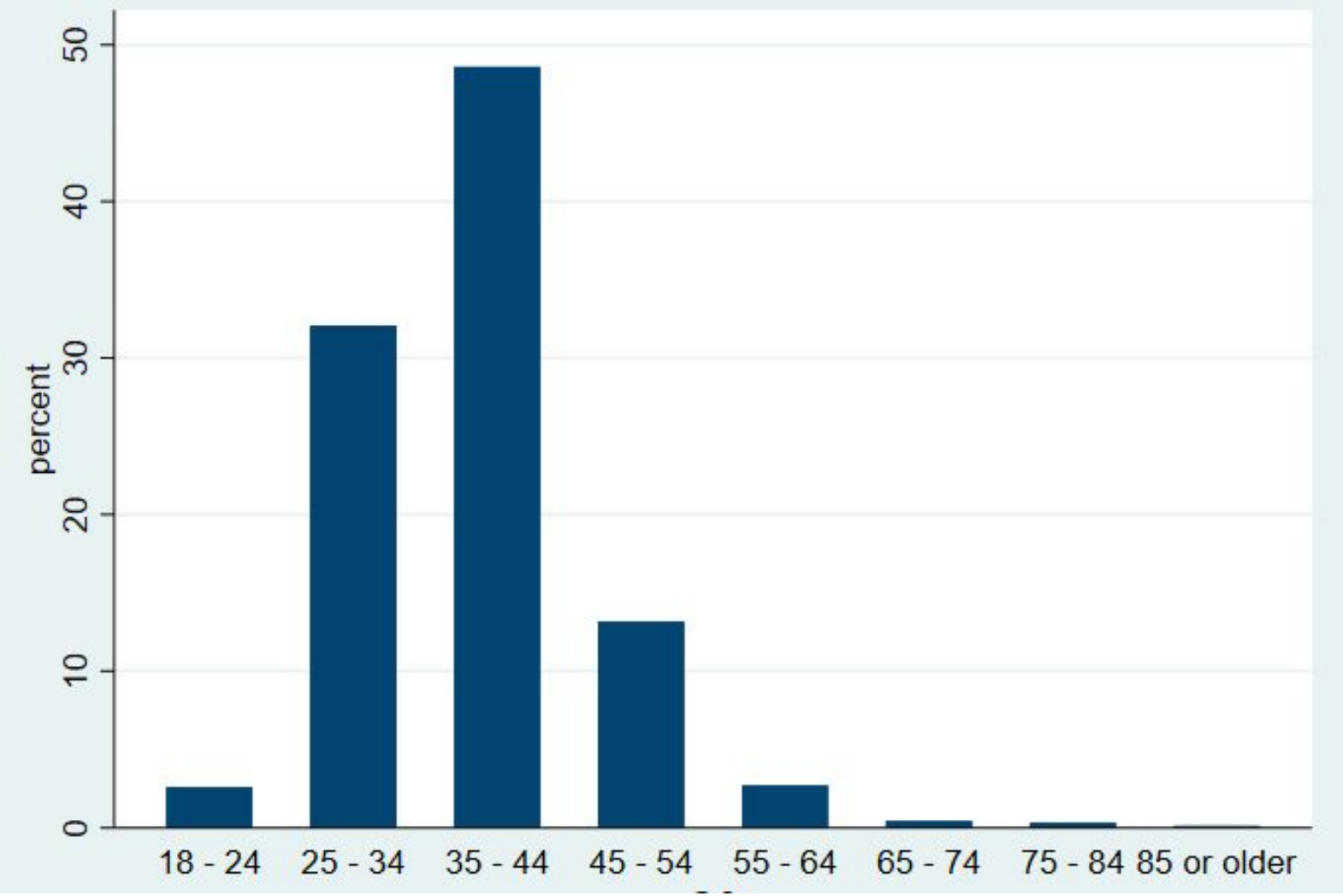
Other part of US



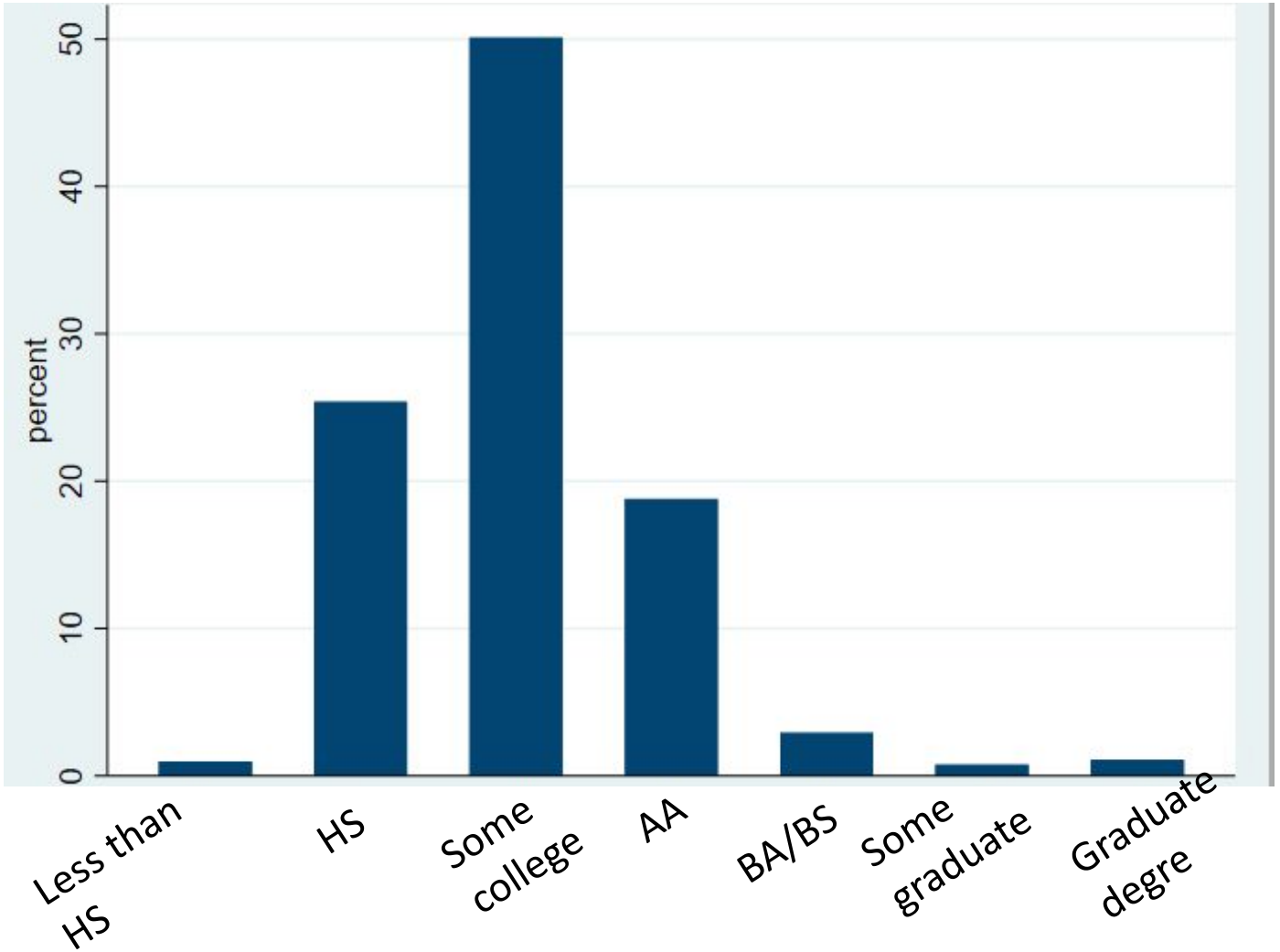
Do respondents work in the fishing industry?



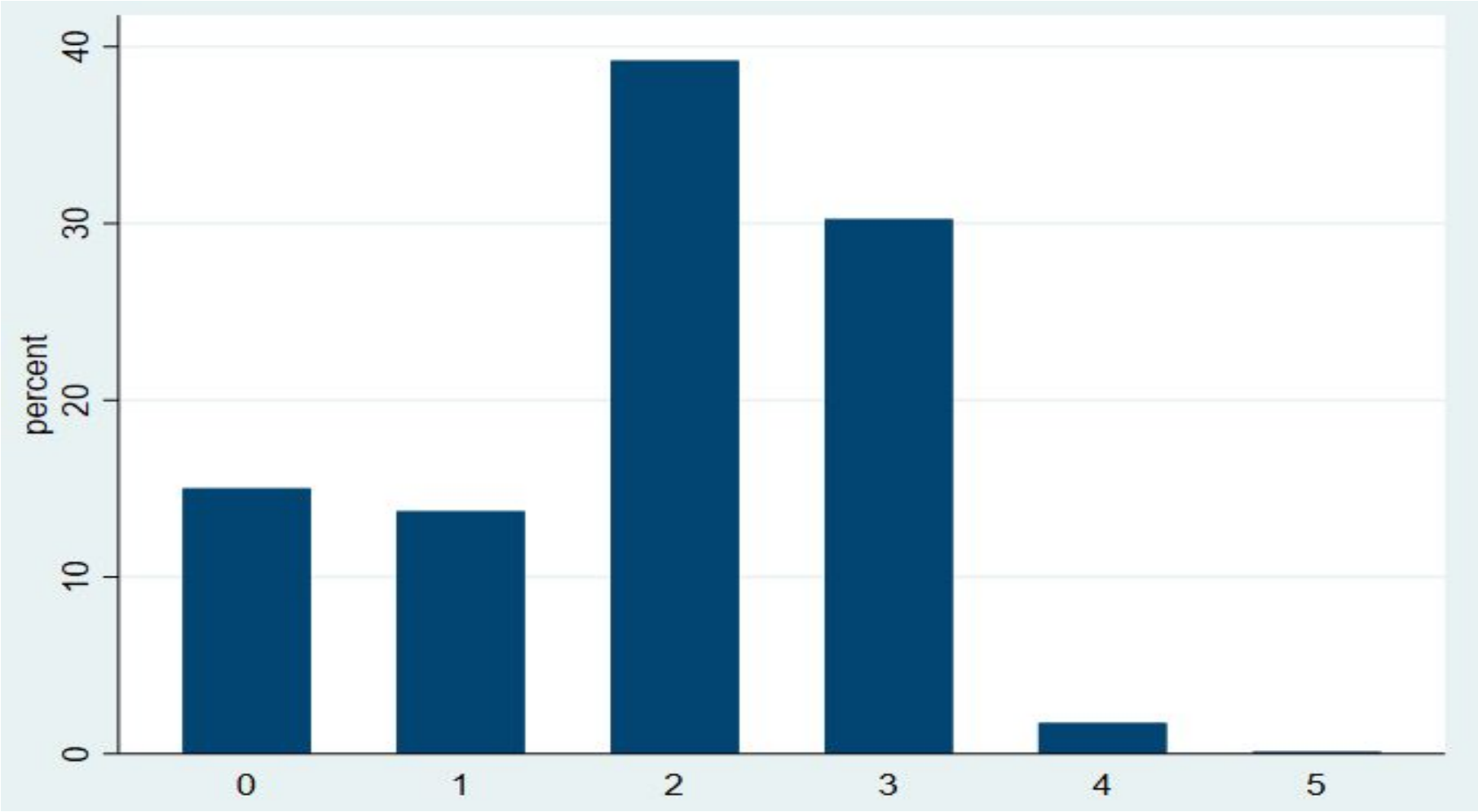
How old are respondents?



What kind of educational background do respondents have?



How many children do respondents have?



Surveying the Bristol Bay fishing industry (and adjacent) during Covid

What kind of information did we get?

- Basic demographics
- Labor force information
- **Health information**
- **COVID-19 related policy questions**
- **Risk perceptions and preferences**

Surveying the Bristol Bay fishing industry (and adjacent) during Covid

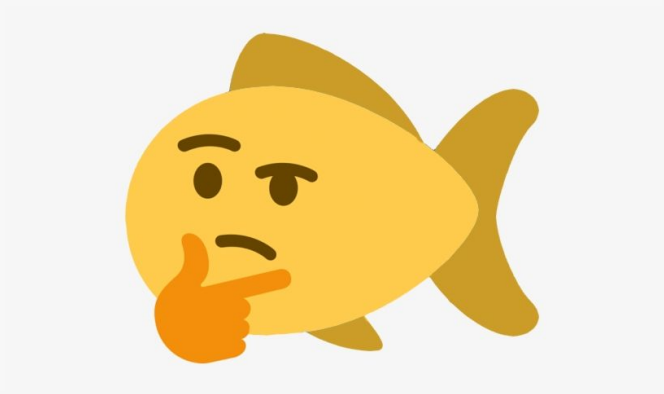
What kind of information did we get?

- Basic demographics
- Labor force information
- **Health information**
- **COVID-19 related policy questions**
- **Risk perceptions and preferences**

and why is it useful? for example...

- **academia:** domain-specific risk preferences and decision-making under risk?
- **policy:** what preferences does the population have surrounding opening/closing the fishery?

Do respondents think it is wise to open the commercial fishery during Covid?



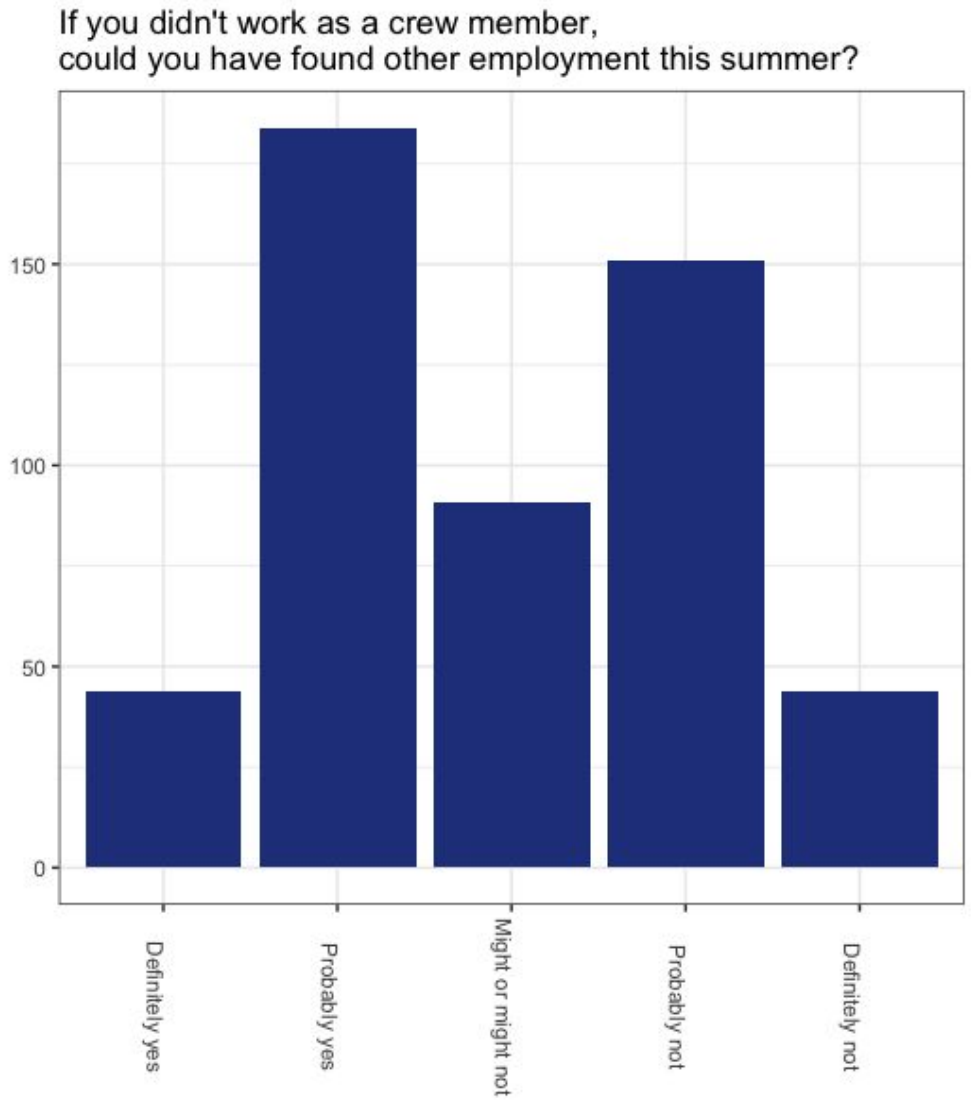
Respondents consider their **economic risks** and their **health risks** (sometimes these overlap!)...

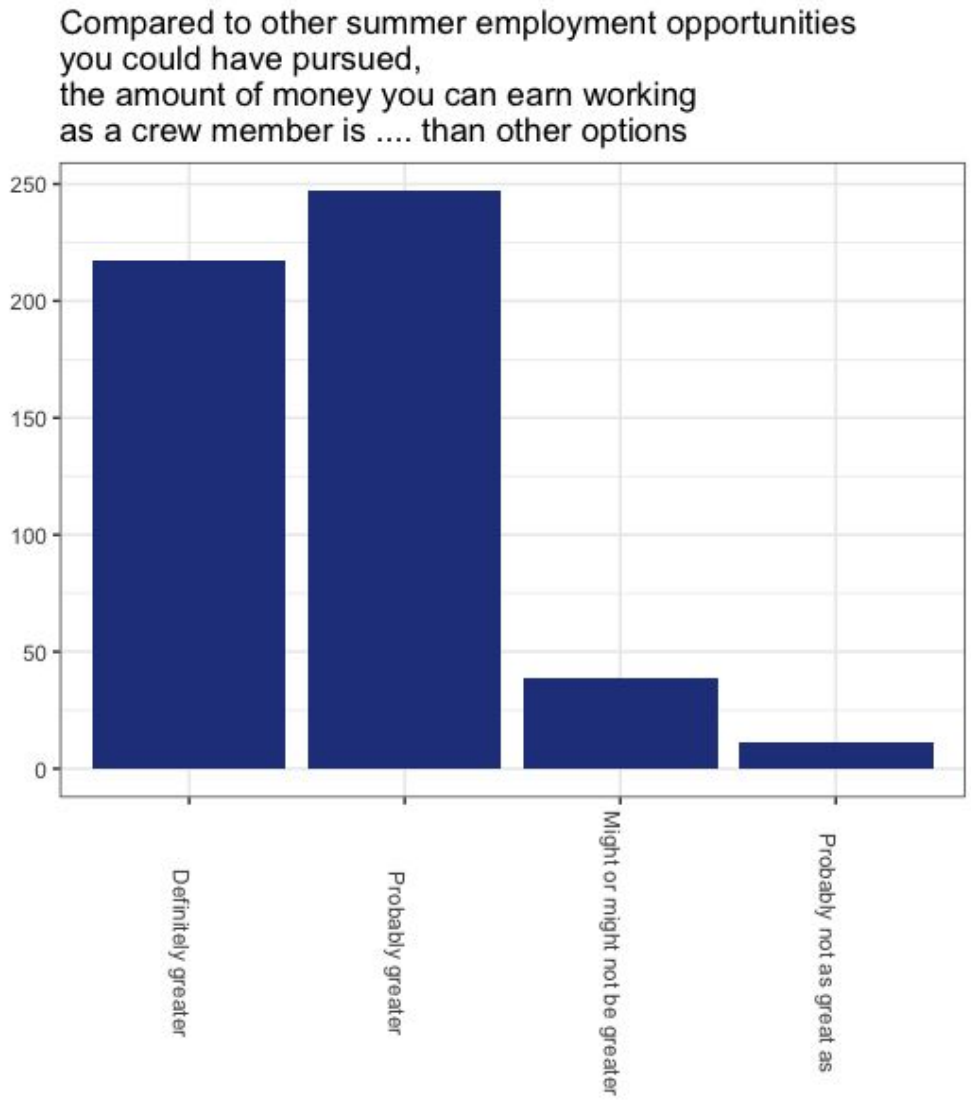
economic risks: (perceived probability and magnitude of) **income loss**

health risks: (perceived probability and magnitude of) **reduced health**

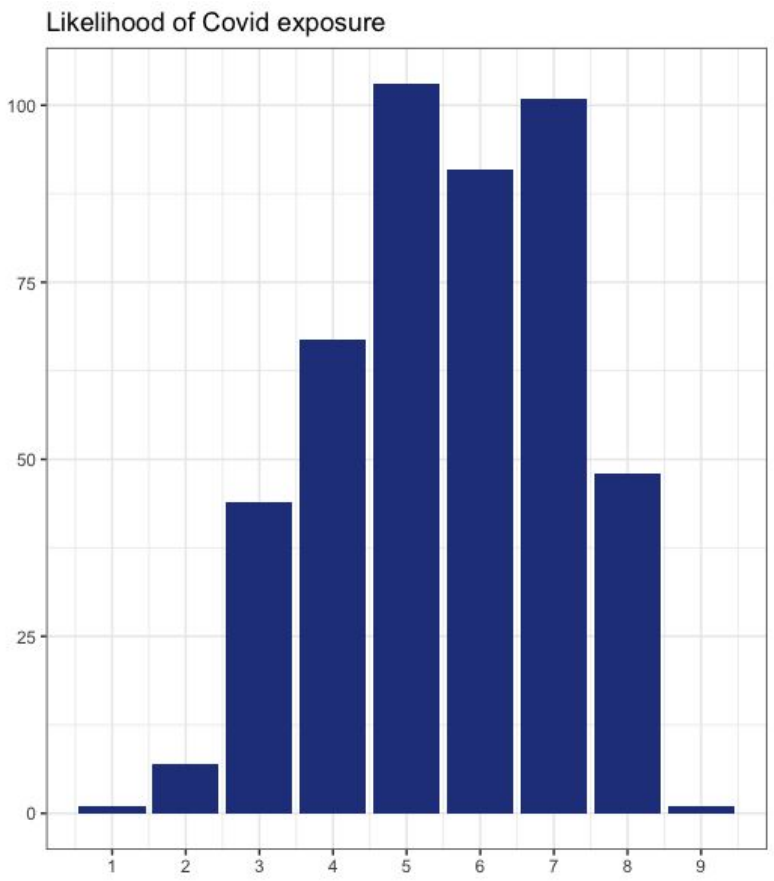
...and make decisions within the context of their (domain-specific) **risk preferences**

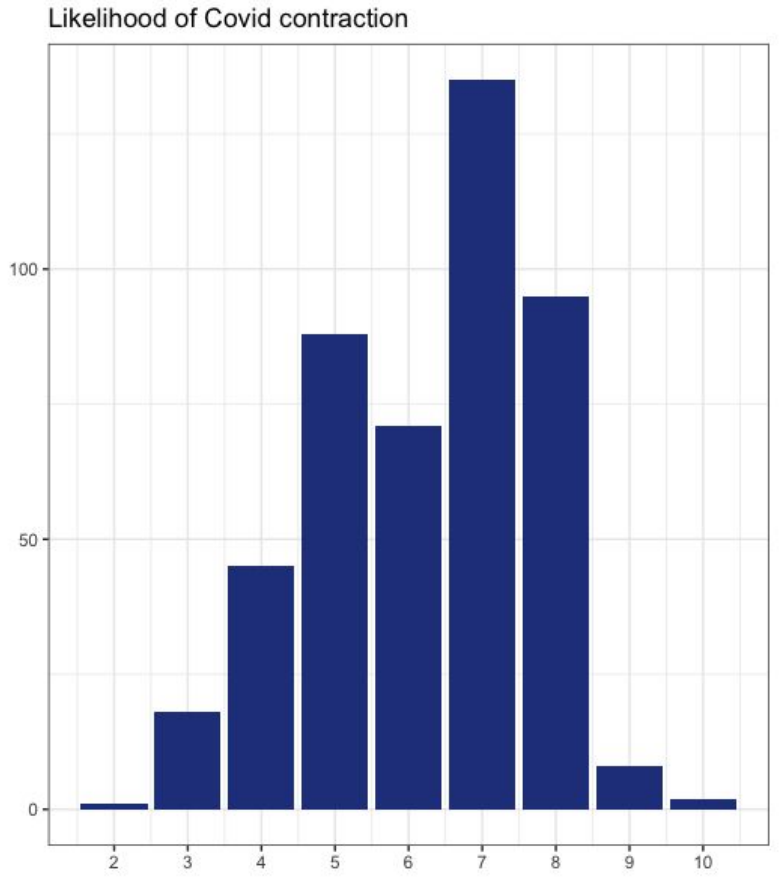
Economic risks for crew members

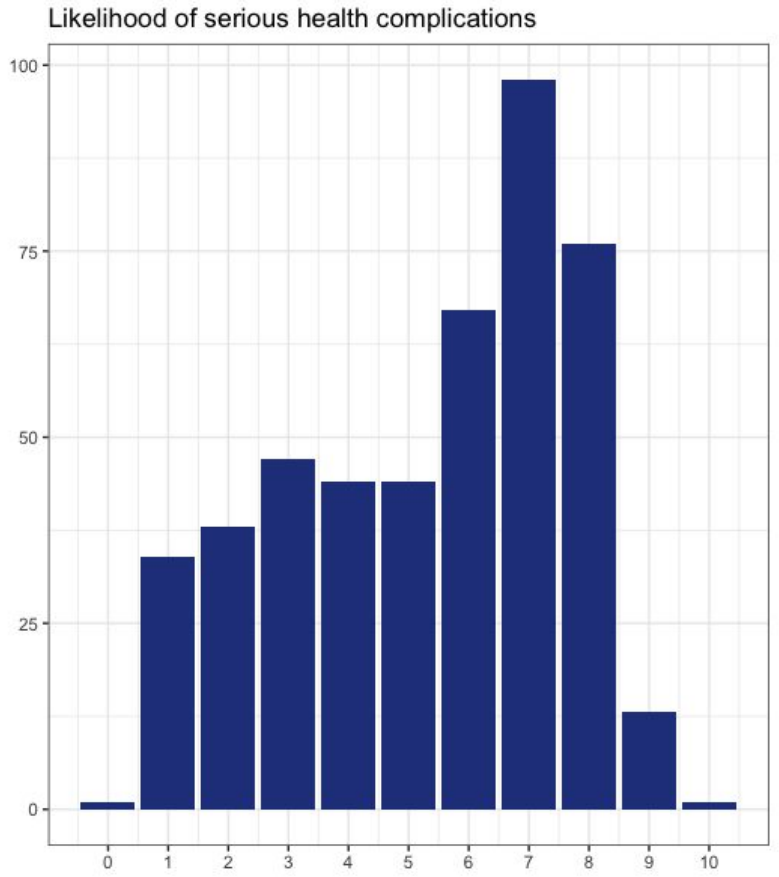




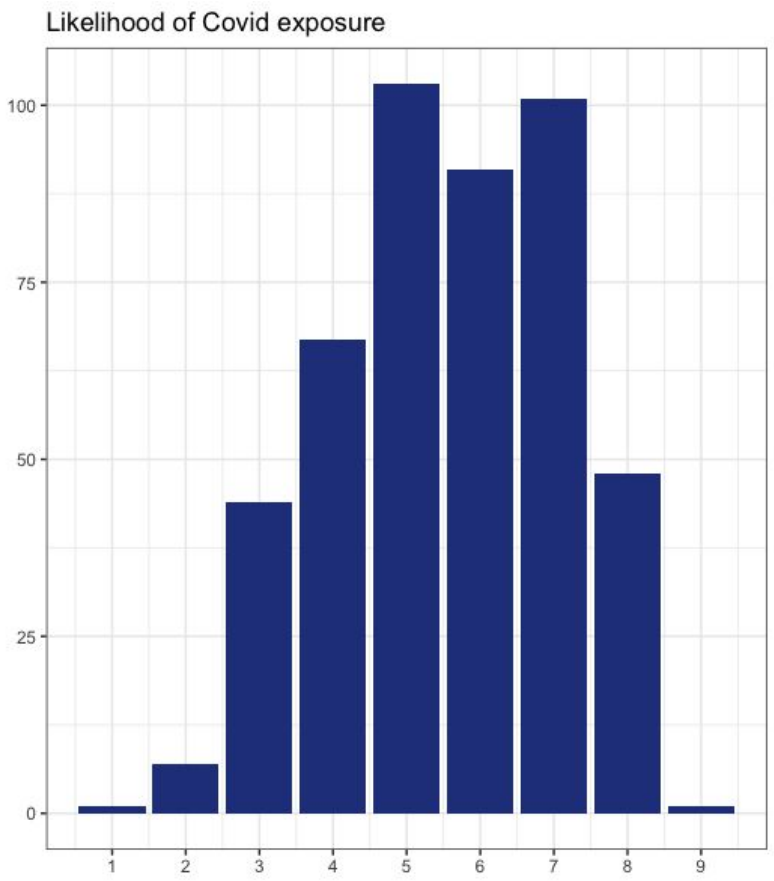
Health risks for crew members

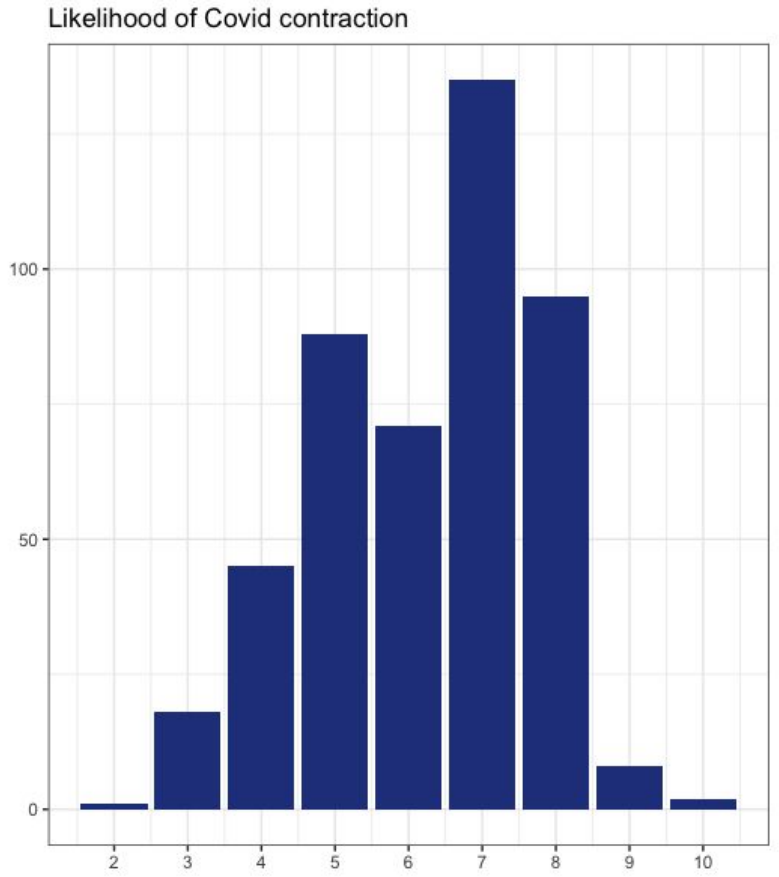


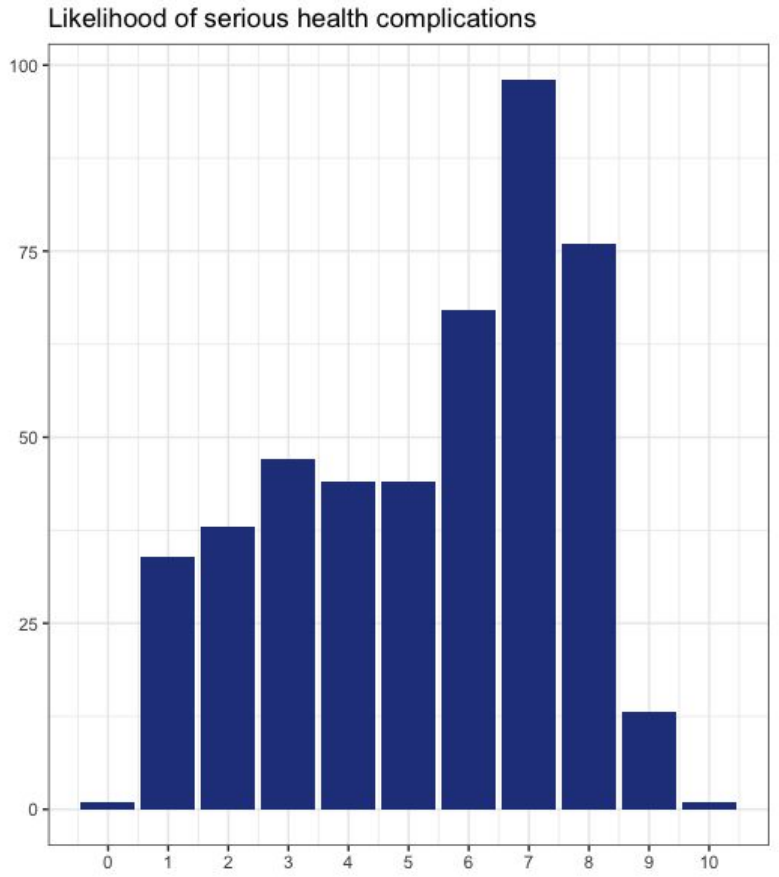




Health risks for crew members

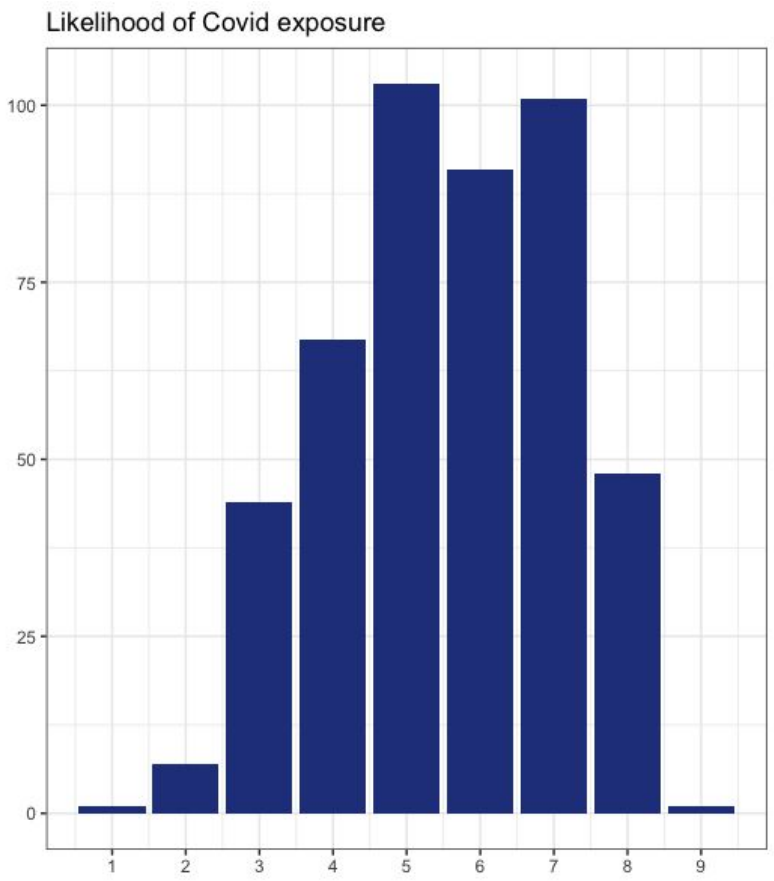


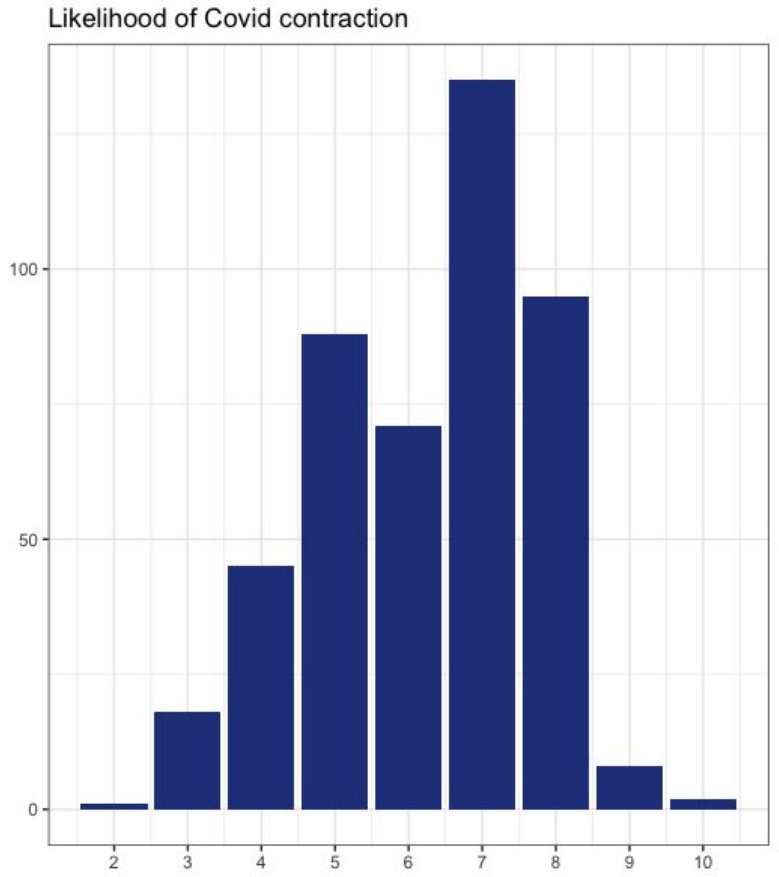


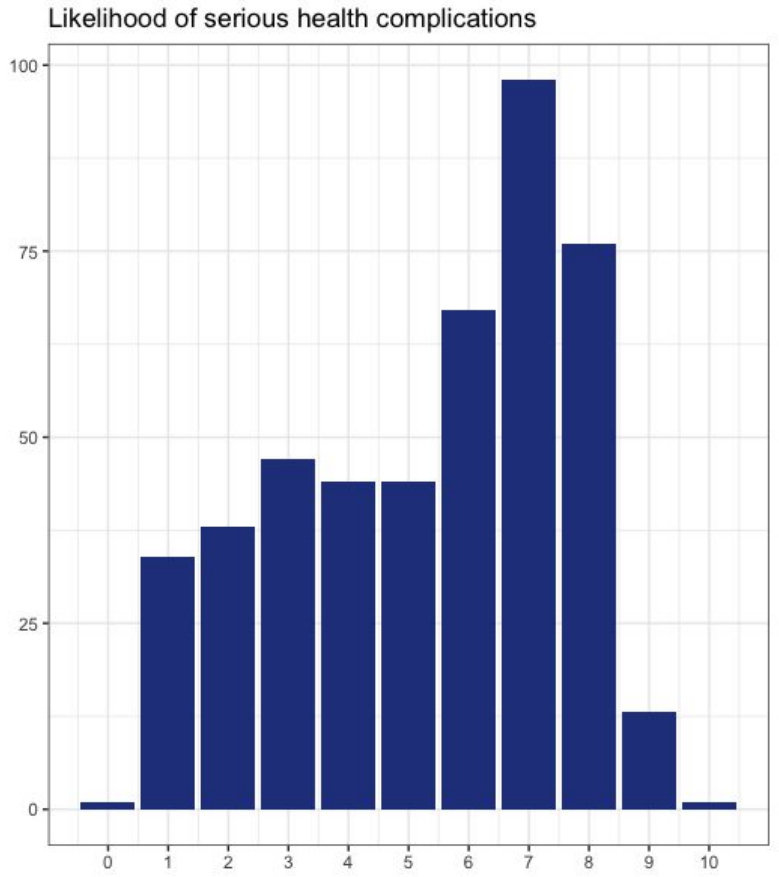


revealed preference: crew members came to work for the summer, so it seems the **potential benefits outweigh potential costs**…

Health risks for crew members



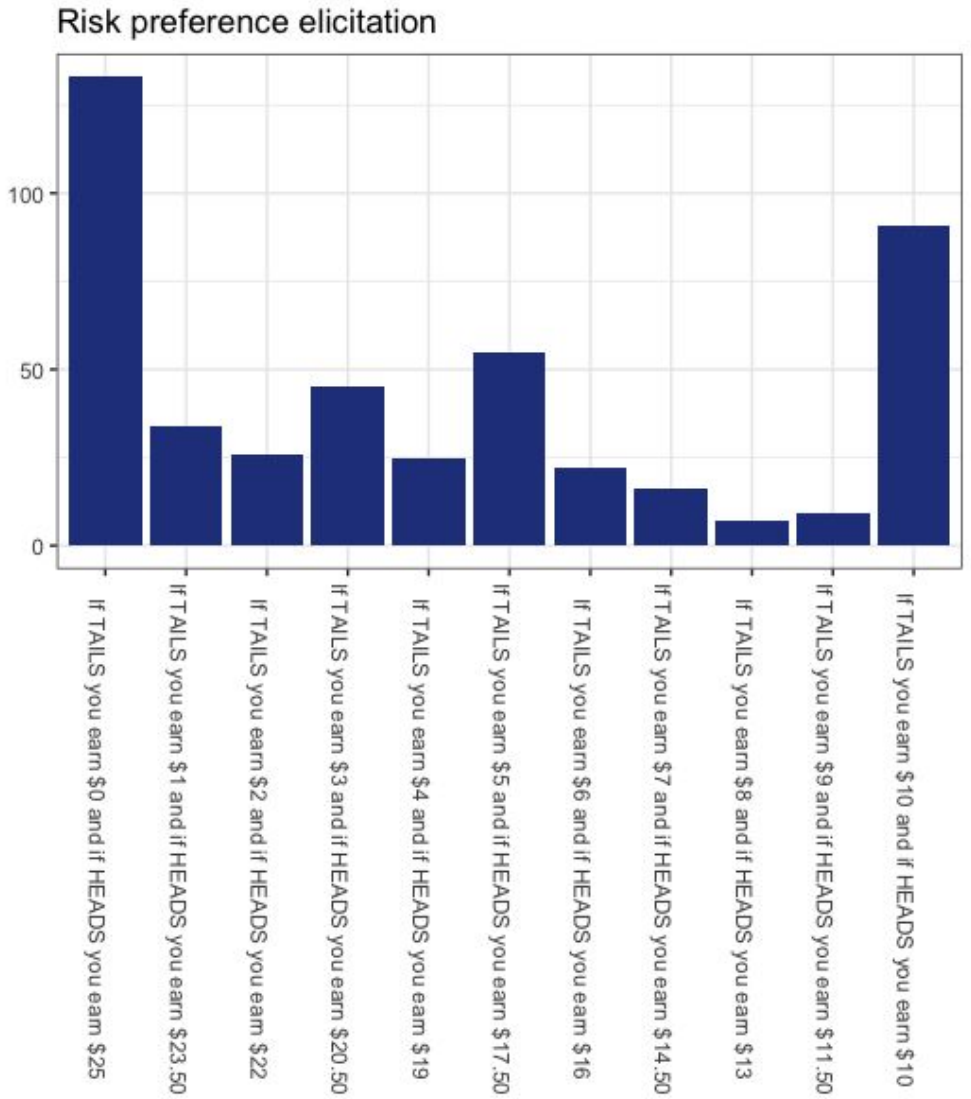




revealed preference: crew members came to work for the summer, so it seems the **potential benefits outweigh potential costs**…

can any of the decision making be explained by **risk preferences**?

Risk preferences of crew members



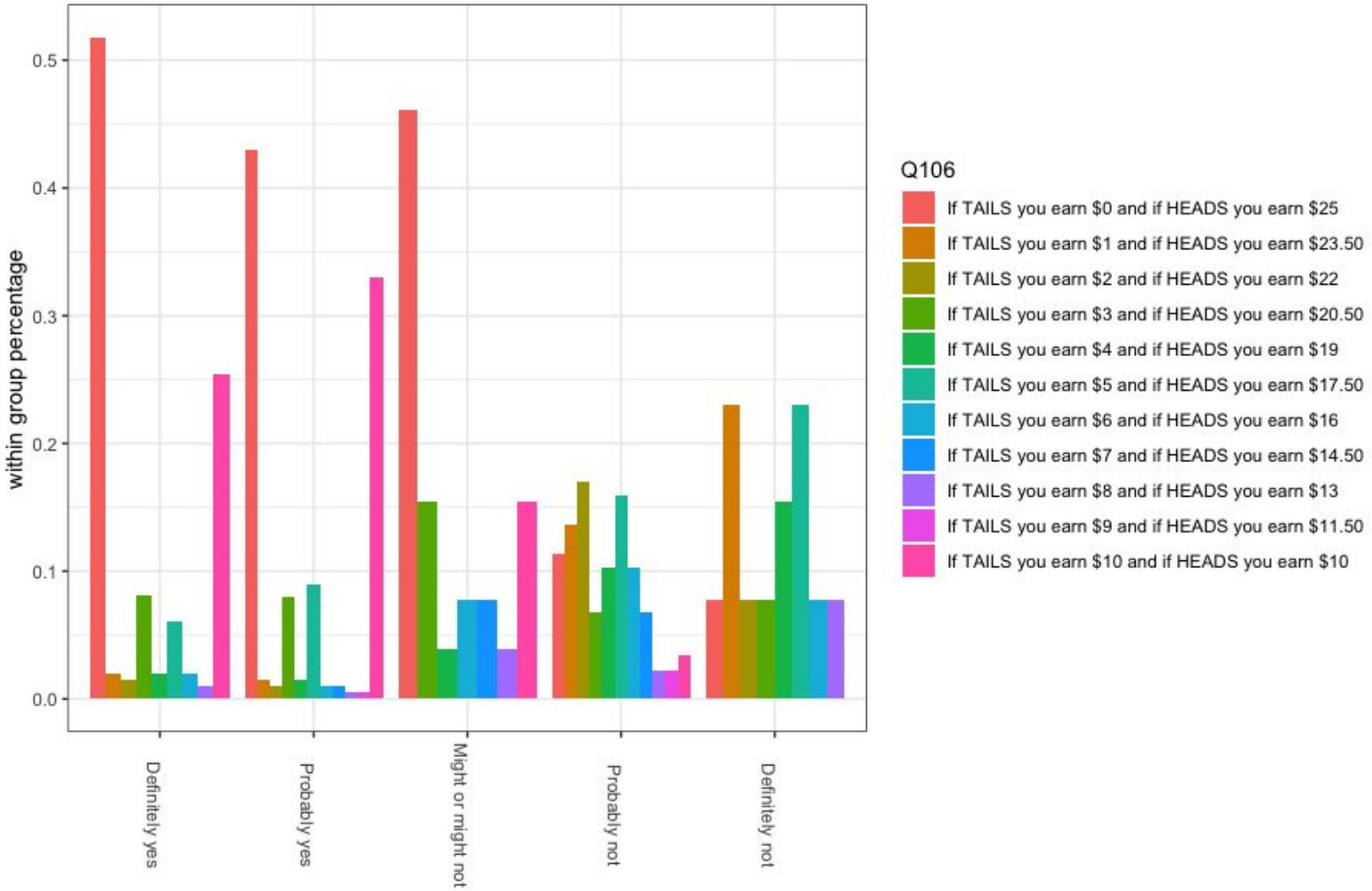
Risk loving → Risk averse

On average, crew members skew toward being **risk loving**. Maybe their risk preference, in part, explains their willingness to participate in the fishery during Covid.

On the other hand, **risk preferences tend to be domain specific**. What are their risk preferences surrounding potential health and income loss?

We also wonder the extent to which this exercise "worked" at eliciting risk preferences. For example, **extreme responses more likely than middle responses.**

What are the risk preferences of **residents** & do they think the fishery should open?



Those that think the **fishery shouldn't open** ("probably not","definitely not") also tend to be more **risk averse** than those that think the fishery should open (or are indifferent).

Those that think the fishery should open also tended to pick more **extreme responses** -- *what does this say about our survey design in general?*

Surveying the Bristol Bay fishing industry (and adjacent) during Covid

What's next?

- second survey in February
- focus on vaccination preferences
- revisit many health/risk-related questions

...any suggestions?

An example regression table...

In this final example, we test how a change in …

1. an individual's perceived risk of catching COVID-19 if someone in the same boat/ processer has COVID (0-10)
2. an individual's perceived risk of serious complications if infected with COVID-19 (0-10)

is affected by a change in comorbidities, a change in age, or a change in a response to the lottery question, controlling for various factors.

Those with Comorbidities are less concerned about acquiring COVID-19 than those without comorbidities. But those with Comorbidities are more concerned about serious complications if they were to get COVID-19.

Those who chose the 50-50 split are more concerned about getting COVID and serious complications from COVID than those less risk averse.

Those over 50 with comorbidities are more concerned about serious complications from COVID-19 than those 50 and older without comorbities.

Younger people ages 35 and under, are less concerned about getting COVID and less concerned about serious health complications from COVID-19 than those over 35 (and less than 50).

Alaska residents are less concerned about both things relative to those temporarily working in Alaska.

	(1)	(2)
	Y=Get_COVID	Y=COVID_Morbidity
comorbidity	-0.507**	0.685**
	(-2.25)	(2.31)
risk_averse	0.610***	1.281***
	(4.52)	(7.03)
male	-0.367*	0.163
	(-1.81)	(0.80)
over50	-0.811*	-0.249
	(-1.70)	(-0.64)
over50_comorbidity	-0.561	1.180*
	(-0.48)	(1.77)
under35	-0.395***	-0.972***
	(-3.35)	(-5.54)
under35_comorbidity	0.807*	0.477
	(1.75)	(0.94)
anai	0.681***	0.536**
	(3.87)	(2.33)
AK_resident	-0.765***	-1.434***
	(-6.23)	(-8.57)
crew_member	-0.629**	-0.320
	(-2.04)	(-1.20)
processor	-1.000***	-0.148
	(-3.49)	(-0.60)
captain	-0.432	-0.095
	(-1.22)	(-0.25)
Constant	7.692***	5.966***
	(25.18)	(19.45)
R2	0.1896	0.2242
N	838	897